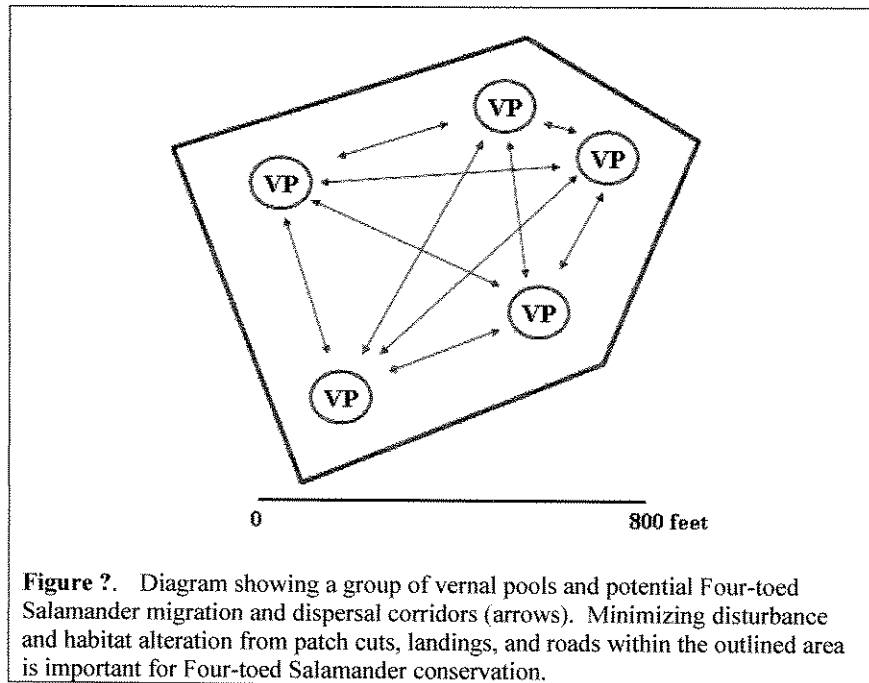


FORESTRY CONSERVATION MANAGEMENT PRACTICES FOR FOUR-TOED SALAMANDERS

TABLE OF CONTENTS

INTRODUCTION	2
How to Obtain Rare Species Information	Error! Bookmark not defined.
The Role of Forestry in the Conservation of Four-toed Salamanders	3
SPECIES BIOLOGY	4
Species Identification	4
Life Span and Time to Maturity	4
Similar Species	4
Salamander Range	5
Life History of Four-toed Salamanders	6
FOUR-TOED SALAMANDER CONSERVATION CONCERNS	8
Status Across Range	8
Activities that Impact Four-toed Salamander Populations	8
RELEVANT LAWS AND REGULATIONS	11
Massachusetts Endangered Species Act	11
Massachusetts Wetlands Protection Act	11
Massachusetts Forest Cutting Practices Act	11
FOUR-TOED SALAMANDER MANAGEMENT PRACTICES	FORESTRY CONSERVATION 13

- G** Patch cuts, new landings, and new skid or woods roads, should not be located between vernal pools when vernal pools are grouped in a cluster (Fig. ?). The forested areas between vernal pools are important dispersal and migration corridors for Four-toed Salamanders.



- G** Where feasible and in accordance with other regulations, leave two snags/acre or older/dying trees uncut in order to provide a future source of large woody debris that will provide shelter and cover. Small patches of uncut trees around snags would avoid possible safety issues.
- G** Leave sections of downed wood 12 inches and larger in diameter and 15 inches long or larger to provide microhabitat areas of shelter and cover.
- G** Avoid disturbing fallen logs as they are important microhabitat features that provide shelter and cover.
- G** Leave limbs and tops in the forest, consistent with other laws, regulations and forestry best management practices, in order to provide a source of woody debris that can be used as cover and shelter objects.

Preventing Salamander Mortality

Conservation management objective

Reduce direct mortality of Four-toed Salamanders from any forestry-associated activity involving motorized equipment, reduce soil compaction and destruction of underground burrows and tunnels, and minimize rutting and disturbance to leaf litter.

Rationale

Adult Four-toed Salamanders have two peak periods during their active season when they are the most concentrated above ground. These occur during the fall mating period and the spring migration period. During the summer, newly metamorphosed juveniles migrate away from breeding sites. By accessing forested areas during the winter when Four-toed Salamanders are inactive, direct mortality will be reduced.

General management recommendations

Adjust the timing of mechanized forestry activities so that the Four-toed Salamander is inactive.

Specific management practices

R Motorized vehicle use, consistent with the Massachusetts Forestry Best Management Practices, may occur between 50 and 250 feet of the high water mark from a breeding pool or other potential wetland breeding habitat between November 15th and March 1st.